XXIII.—Notices of British Fungi. By the Rev. M.J. BERKELEY, M.A., F.L.S., and C. E. BROOME, Esq., F.L.S.

[Plates III., IV., V.] [Continued from p. 56.]

1144. Glæosporium umbrinellum, n. s. Maculis irregularibus angulatis brunneis; sporis pallidis.

On fallen oak-leaves. Charmy Down, near Batheaston, Oct.

1865.

Forming minute brown spots; spores binucleate, '0004-'0006 inch long, supported on long, often forked, sporophores, at length oozing out in the form of a pale irregular tendril.

PLATE III. fig. 5. Spores supported on their sporophores; and separate,

more highly magnified.

1145. Sporidesmium opacum, Cd. Fasc. i. f. 115.

On stumps of wych elm, near St. Catharines, March 31, 1865. C. E. Broome.

When young, forming small, round, cinereous tufts, sparingly

seattered over the wood.

This has been received from Mr. Bloxam under the name of S. fasciculatum; but it does not agree with Corda's character, "soris effusis."

PLATE III. fig. 6. Spores and sporophores, magnified.

1146. S. lobatum, n. s. Stipite articulato, deorsum hyalino, sursum in articulos subquaternos subglobosos divisum.

On fir sticks. Lucknam, April 12, 1865.

Forming minute, black, pulvinate tufts. At first simple and strongly swollen above. The upper articulation then divides, and ultimately gives off the spores, which are '0006 inch long. The whole plant is about '001 high.

PLATE III. fig. 7. Spores in various stages, magnified.

1147. Puccinia Apii, Cd. Fasc. vi. tab. i. fig. 11.

On celery, about London, Sept. 1865, destroying the crops. Plants sent down to Cambridgeshire were equally affected. For further notice see Journ. Hort. Soc. n. s. vol. i. 1866.

1148. Thecaphora hyalina, Fingerh. in Linn. x. p. 230

(Uredo Seminis Convolvuli, Desm. no. 274).

In the capsules of Convolvulus Soldanella. King's Lynn, J. Lowe, Esq.

*Stilbum fasciculatum, B. & Br. no. 492.

This is clearly what is figured by Tulasne as a state of his Sporostilbe gracilipes, Carp. iii. tab. 14. figs. 14-19.

1149. Rhinotrichum repens, Preuss in St. Deutsch. Fl. 25 &

26, no. 22.

On fallen trunks of trees. Leigh Wood, Oct. 1865. Fine-shade, Norths., May 31, 1866. On very rotten oak-branches.

Ann. & Mag. N. Hist. Ser. 3. Vol. xviii.

Probably extremely common; but, as it looks like a mere bloom,

it may easily escape notice.

1150. Psilonia discoidea, n. s. Pallide cervina, dein fusca, disco prolifero; sporis oblongis, margine discreto roseo-alutaceo. On very rotten rails. Langley, Wilts, Jan.-Feb. 1866, C. E.

Broome.

Whole plant 1-2 lines across, variously shaped, orbicular, elongated, flexuous, &c. In the early stage the disk is quite covered by the shaggy coat, which afterwards folds back or cracks, and leaves the stratum of spores naked, precisely as in Myrothecium. Spores oblong or, seen laterally, subcymbiform, 00035 inch long. Our plant, however, wants the gelatinous element of that genus, and is nearer to Psilonia than any published genus.

PLATE III. fig. 8. a. plants in various stages, one of them proliferous, slightly magnified; b. portion from edge of a plant, showing the spores on their sporophores; c. spores highly magnified.

1151. Morchella crassipes, Pers. Syn. p. 621.

On red soil, April 1866, Miss L. E. Lott, at King's Kerswell,

near Newton Abbot, Devonshire.

This magnificent fungus attains a height of 9 inches or more, and is remarkable for its grooved stem. It is of a soft, brittle substance, and does not dry well like the common morel. It is, however, sold in the market at Prague for present use, where it occurs in autumn as well as spring. It is well figured in Krombholz's large work, at plate 16. fig. 1.

1152. Helvella sulcata, Afzelius in Vet. Ac. Handl. 1783,

p. 305.

On the ground. Bowood, C. E. Broome, Oct. 20, 1863.

A small but very neat variety. Spores very broadly elliptic,

with a single large globose nucleus, .0006-.0007 long.

1153. Peziza (Helvelloideæ) phlebophora, n. s. Cupulis poculiformibus, obliquis, substipitatis, subtiliter pulverulentis, basi venoso-costatis.

On clay banks. King's Cliffe, M. J. Berkeley. Brislington,

C. E. Broome.

Cup $\frac{1}{2}$ — $1\frac{1}{2}$ inch across, often rather oblique, yellow or brownish, springing from a very short stem-like base, from which branched ribs are given off, ending in little pits. Sporidia 0004 inch long, while those of *P. leporina* are 0006 with curved paraphyses, and those of *P. onotica* 0005. Hymenium often venose. Figures are added of the fruit of these species.

PLATE III. fig. 9. a. P. phlebophora, nat. size; b. ascus, magnified; c. sporidia, highly magnified.

Fig. 10. Sporidia of P. onotica, highly magnified.

Fig. 11. a. curved paraphysis of P. leporina, magnified; b. sporidia, highly magnified.

1154. P. (Helvelloideæ) bufonia, P. Myc. Eur. vol. i. p. 225. On heaps of rubbish by the side of the road. Grantham, Mr. W. Summerby.

Resembling P. vesiculosa, but distinguished by the brown hymenium and verrucose cup. Sporidia 00075-0008 inch

long; in P. vesiculosa '0009.

PLATE III. fig. 12. Sporidium, highly magnified.

*P. (Humaria) rutilans. Fr. Ep. p. 68 (P. leucoloma, St. Deutsch.

Fl. 32. tab. 17).

It is almost impossible to make out the red Pezizas of the tribe Humaria without specimens, as by far the best characters are derived from the fruit. We have now authentic specimens of this plant before us, and find that our *Peziza humosa* is this species. The sporidia, when perfectly developed, are strongly echinulate, with one or more (rarely two) nuclei, and '001 inch long.

PLATE III. fig. 13. a. ascus with paraphysis, magnified; b. sporidia,

highly magnified.

1155. P. (Humaria) aggregata, n. s. Gregaria, confluens, obconica, aurantia, basi albo-tomentosa; hymenio concavo; sporidiis fusiformibus.

On heathy ground. Bewick, Dr. Johnson.

The peculiar crowded habit and fusiform sporidia, '0008 inch long by '0003 wide, easily distinguish this species.

1156. P. (Humaria) subhirsuta, Schum. Sæl. p. 433.

On the ground. Batheaston, C. E. Broome.

Asci linear; sporidia smooth, elliptic, enucleate, '0006 inch long; paraphyses slightly clavate.

PLATE III. fig. 14. a. ascus with paraphysis, magnified; b. sporidia, more highly magnified.

*P. (Humaria) humosa, Fr. Ep. p. 71.

This in turn is what is called P. Polytrichi under no. 768. Sporidia variable in size, .0006-.001 inch long, by .0003-.0005 broad; paraphyses forked. P. Polytrichi will still remain for the Scotch plant.

Subjoined are sketches of the fruit of *P. leucoloma*, of which, it may be observed, some specimens belong to *Ascobolus Crouani*, Cooke, and of *P. fibrillosa*, Curr., found at Hanham, which

resembles externally P. humosa.

PLATE III. fig. 15. a. ascus with paraphyses, magnified; b. sporidia, more highly magnified. The plant from which the dissections were taken was gathered at Hanham.

Fig. 16. a. ascus and paraphyses of P. leucoloma, magnified; b. sporidia, more highly magnified, '0006-'0008 inch long, '0004 wide; c. end

view of ditto.

Fig. 17. a. ascus and paraphyses of P. fibrillosa, Curr., magnified; b. sporidia, more highly magnified, '0006-0007 inch long, '0003 wide.

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1157. P. (Humaria) brunneo-atra, Desm. no. 826.

On the ground. Leigh Wood, C. E. Broome.

Asci linear; sporidia minutely echinulate, '0007-'0009 inch long. In Desmazière's authentic specimen, '0006-'00075.

PLATE IV. fig. 18. a. ascus, magnified; b. sporidia, more highly magnified.

1158. P. (Humaria) salmonicolor, n. s. Parva, gregaria; cupulis subhemisphæricis hymenioque salmonicoloribus; ascis oblongis; sporidiis biserialibus, ellipticis, enucleatis.

On the side of a ditch. Woodnewton, Oct. 1858.

Sporidia '0008 inch long, sometimes '0005 broad. Nearly allied to P. hæmastigma.

PLATE IV. fig. 19. a. ascus and paraphyses, magnified; b. sporidia, more highly magnified.

1159. P. (Humaria) hæmastigma, Fr. Syst. Myc. ii. p. 74; Sturm, Deutschl. Fl. 33. tab. 11.

On the walls of a cottage. Pen y Gwryd, North Wales, Sept.

1862, C. E. Broome.

Asci short, oblong, subclavate; sporidia biseriate, '0006 inch long by '0009, or nearly globose.

PLATE IV. fig. 20. a. ascus, magnified; b. sporidia, more highly magnified.

1160. P. (Encœlium) fraxinicola, n. s. Sparsa vel stipata, cupulis extus pallide cervinis furfuraceis, intus fuscis; hymenio leviter depresso; sporidiis uniseriatis.

On ash-twigs. Northamptonshire.

Cups at first closed, then opening with an irregular aperture, at length orbicular, slightly depressed, pale fawn-colour and furfuraceous externally, umber-brown within; hymenium slightly depressed; asci elongated clavate; sporidia uniscriate, elliptic, 00045 inch long.

PLATE IV. fig. 21. a. ascus, magnified; b. sporidia, more highly magnified.

*P. (Sarcoscyphæ) pygmæa, Fr. Syst. ii. p. 79.

On bits of dead stick, apparently gorse. Ascot, Rev. G. Sawyer, 1863. In moss and turfy mould, on Blackdown Hills,

near Taunton, March 1866. Wimbledon, May 1866.

About 4 inch high when full-grown, stipitate, the stem branching out or dividing into several heads, which form cups resembling the genus *Ditiola* or *Tympanis*; when young and unbranched, resembling *Solenia*. The cups are often proliferous, producing smaller cups on their surface, of a bright apricot-co-lour, but whitish towards the margin. A figure of the proliferous state will appear in the forthcoming number of the Linnæan

Transactions. Sporidia uniseriate, linear-oblong, '0005-'0006 inch long.

PLATE IV. fig. 22. a. asci, magnified; b. sporidia, more highly magnified.

*P. (Sarcoscyphæ) radiculata, Sow. t. 114.

Fine specimens of this rare species have been found this year by Mr. Jerdon near Jedburgh, in a fir-wood.

Sporidia 0005 inch long, rather broad, binucleate.

PLATE IV. fig. 23. Sporidia, highly magnified.

Fig. 24. a. ascus of the same species in Rabenhorst, specimen no. 618; b. sporidia of ditto ('0007 inch long), more highly magnified.

1161. P. (Sarcoscyphæ) lanuginosa, Bull. tab. 396. fig. 2. Var. Sumneri cupula demum radiato-fissa, margine junioris anguste nudo.

Under cedars. Fetcham Park, Mrs. Holme Sumner. Chiswick House, Mr. Edmonds, Jan.-May. Under a larch, Wilson

Saunders, Esq.

At first entirely buried, then forcing its way through the soil, and splitting into several lobes, like a Geaster, which it much resembles from its thick substance. The outer coat is densely clothed with flexuous hairs, very different from those of Peziza hemisphærica. The sporidia, moreover, are shortly and bluntly fusiform.

A large and magnificent species, acquiring frequently a diameter of 2 inches, and combining in some measure the characters of P. sepulta and P. hemisphærica, from both of which it differs marrially in the subfusiform fruit. It has also a very close affine to Tulasne's genus Hydrocystis. It has been observed for many years at Fetcham, but has not hitherto been recorded as I stish. Bulliard's plant is considered by Fries a variety of A. hemisphærica, but it is really very different. In plants which are just open a delicate veil is often found stretched over the orifice.

A figure and analysis of this fine fungus will appear in the forthcoming number of the Linnean Transactions.

PLATE IV. fig. 25. a. hairs from outer surface, magnified; b. ascus with paraphyses, ditto; c. sporidia, highly magnified.

1162. P. (Sarcoscyphæ) Geaster, n. s. Brunnea, cupula sub-globosa, floccosa, demum radiato-fissa.

On the ground. Wentworth, Oct. 9, 1858, Mr. J. Henderson. About an inch across; hairs flexuous, branched, articulated, often giving out little curved hyaline processes with a few straight bristles intermixed. Hymenium brown like the rest of the plant. Paraphyses clavate; sporidia elliptic, with the ends very slightly attenuated, '0009 inch long. The sporidia of P. sepulta, a much coarser species, are of the same length.

This is closely related to the last, but very distinct.

PLATE IV. fig. 26. a. hairs, magnified; b. sporidia, highly magnified. Fig. 27. Sporidia of P. sepulta, highly magnified.

1163. P. (Sarcoscyphæ) umbrosa, Fr. Syst. ii. p. 85. On the ground. Bewick, Dr. Johnston. Sporidia '0008 inch long, '0007 inch wide.

PLATE IV. fig. 28. a. hair, magnified; b. ascus with paraphyses, ditto; c. tips of paraphyses, more highly magnified; d. sporidia, ditto.

*P. (Sarcoscyphæ) vitellina, Pers. Myc. Eur. i. p. 257. On the ground. Wareham, C. E. Broome. Sporidia '0009 inch long by '0005.

PLATE IV. fig. 29. a. ascus with paraphysis, magnified; b. sporidia, more highly magnified.

1164. P. (Dasyscyphæ) calyculæformis, Schum. Sæl. p. 425. On dead wood. Twycross, Rev. A. Bloxam, May 10, 1859.

1165. P. (Dasyscyphæ) Acuum, Fr. Syst. ii. 95.

On leaves of spruce fir. Mossburnford, A. Jerdon, Esq. 1166. P. (Fibrina) leptospora, n. s. Cupulis primum hemisphæricis, dein applanatis, extus e floccis sparsis nigris minutissimis appressis luridis, intus albidis; sporidiis filiformibus.

On decayed wood. Jedburgh, A. Jerdon, Esq.

About half a line across; at first perfectly globose, often collapsed in the centre, but gradually opening and exposing the soft, pallid, sometimes straw-coloured hymenium. Asci oblong; sporidia very long and slender, filiform, flexuous, with a row of globular nuclei, at length repeatedly septate.

PLATE IV. fig. 30. a. ascus, magnified; b. sporidia, highly magnified.

1167. P. (Calycinæ) imberbis, Bull. t. 467. f. 2. On willow. Mossburnford, A. Jerdon, Esq.

Sporidia linear, slightly curved, about 0004 inch long.

1168. P. (Mollisia) erythrostigma, n. s. Minima, stipitata, punctiformis, pallide rubra; hymenio demum convexo; ascis clavatis; sporidiis uniseriatis, ellipticis vel subglobosis.

Parasitic on Sphæria phæostroma. C. E. Broome.

The stem is mostly curved, distinctly cellular. Asci clavate; spores minute, subglobose. Very minute, but a pretty object under the microscope.

PLATE IV. fig. 31. α . plant, magnified; b. asci with sporidia, highly magnified.

1169. P. (Mollisia) peristomialis, n. s. Minuta, cylindrica, pallida, ore dentibus longis triangularibus cellulosis albis ornato, disco planiusculo; ascis lanceolatis; sporidiis biserialibus, fusiformibus, multinucleatis.

On holly. Penzance, J. Ralfs, Esq.

A most exquisite object under a moderate magnifier, resembling some Actinia in miniature. Sporidia '001 inch long.

PLATE V. fig. 32. a. group, magnified; b. ascus, magn.; c. sporidia, highly magnified.

1170. P. (Mollisia) viburnicola, n. s. Subglobosa, dein hemisphærica, cinerea, extus granulata; margine denticulato, furfuraceo; hymenio pallidiore.

On either side of dead leaves of Viburnum. Received from

England by A. Jerdon, Esq.

Minute, punctiform, externally speckled with little dark tufts of cells, which sometimes give out a few short flexuous hairs. Asci clavate; sporidia lanceolate, '0004-'0005 inch long.

1171. P. (Mollisia) nervisequia, Desm. no. 2012.

On leaves of *Plantago lanceolata*. St. Catharines, near Batheaston, Feb. 1852, C. E. Broome.

Sporidia '0004 inch long.

1172. Stictis lecanora, Schm. & Kze. no. 174.

On dead willow-twigs. Jedburgh, A. Jerdon, Esq. 1173. P. (Patellea) Resinæ, Fr. Syst. vol. ii. p. 149. On resin. Sparingly near Jedburgh, A. Jerdon, Esq.

This appears to be a true Peziza from its mode of rooting into

the bark.

1174. Helotium pruinosum, Jerd. in litt. Minutum, candidum, sessile vel brevissime stipitatum totum albo pruinosum; disco pallide carneo; sporidiis elongato-cymbiformibus, 3-4-nucleatis.

On Hypoxylon fuscum and stigma. Appin, Capt. Carmichael.

Jedburgh, A. Jerdon, Esq.

The hymenium, which has sometimes a slight blush tinge, is pruinose as well as the outer surface. Sporidia 0006 inch long. Some of the specimens referred formerly to Peziza episphæria certainly belong to this species, which was originally called P. pruinosa by Capt. Carmichael. The same plant occurs at Belvoir, with the sporidia 0004-0005 inch long.

PLATE V. fig. 33. Sporidia, highly magnified.

1175. Hypomyces Broomeianus, Tul. Carp. iii. p. 108 (Hypocrea luteo-virens, Rabenh. no. 751).

On Polyporus annosus. Batheaston, C. E. Broome.

PLATE V. fig. 34. a. thread with conidia, magnified; b. conidia, '0002-'0003 inch long, more highly magnified; c. ascus, magn.; d. sporidia, '0005-'0006 inch long, highly magnified.

*H. ochraceus, Tul. Carp. iii. p. 41.

This is, in all probability, Cryptomyces aurantia, Grev. t. 78. Blastotrichum Puccinioides, Preuss, Sturm's Deutschl. Fl. 25 & 26, tab. 11, is evidently a state of this or some closely allied species, and has occurred at Batheaston. Hypomyces aurantius has been

found in Flintshire, on Pol. squamosus, and has also been gathered on Agaricus ostreatus. Sphæria aurea, Grev., is a Nectria. The species from Laxton on Boletus is H. luteo-virens.

PLATE V. fig. 35. a. ascus, magnified; b. sporidia, '001 inch long, highly magnified.

1176. Hypocrea delicatula, Tul. Ann. d. Sc. Nat. sér. 4. vol. xiii. p. 18; Carp. Fasc. iii. tab. 4. figs. 7-13.

Fir-plantations. Lucknam, April 1866.

This extremely interesting fungus is nearly allied to *H. citrina*, of which it has the habit. It forms patches which are easily separable from the matrix, of a delicate cream-colour, studded

with the fawn-coloured perithecia.

1177. Sphæria (Denudatæ) Epochnii, n. s. Peritheciis primum conicis, dein subglobosis, collapsis, stipatis, atro-olivaceis, granulatis; ascis clavatis; sporidiis uniserialibus, fusiformibus, medio constrictis, demum triseptatis; conidiis elongatis, triseptatis, apice incrassatis.

On Epochnium fungorum, of which it is the perfect form.

Warleigh, near Bath, March 1866.

Perithecia at first pale bottle-green, crowded in the centre of the *Epochnium*, then black green, granulated, sometimes depressed at the summit, with a minute pore. Asci clavate, containing a single row of triseptate fusiform sporidia, '001-'0011 long, strongly constricted in the centre, at length pale brown, when they resemble a good deal the naked spores of the *Epochnium*. The sporidia are at first uniseptate, with two nuclei in each division.

PLATE V. fig. 36. a. plant, magnified; b. portion of mycelium with conidia (epochnium); c. conidia, highly magn.; d. ascus with sporidia, magn.; e. sporidia, young and old, highly magnified.

1178. S. (Caulicolæ) Alliariæ, Auersw. Rab. no. 261. On Erysimum Alliaria. Jedburgh, A. Jerdon, Esq.

1179. Dothidea melanops, Tul. Carp. ii. p. 73, tab. 10. Abundant on beech near Jedburgh, but without perithecia.

A. Jerdon, Esq.

Mr. Jerdon's specimens, though on beech, correspond better with Tulasne's typical form on oak than his variety fagicola. The stylospores are just the same, and not comparatively short, as in the variety.

1180. Hysterium varium, Fr. Syst. vol. ii. p. 582; Duby,

Hyst. p. 28.

On decorticated branches of yew. Wynd Cliff, April 18, 1866.

Scattered over pallid spots; perithecia elliptic, subimmersed, with a slight keel and very obscure aperture, quite even; asci clongated; sporidia uniscriate, elliptic, slightly pointed at either

end, uniseptate, with a large nucleus in each division, '001 inch long by '0005 broad.

The sporidia of this and the next species differ entirely from those of our other British species. Duby's plant is on Juniperus phæniceus, that of Fries on oak.

PLATE V. fig. 37. a. asci and paraphyses; b. sporidia, highly magnified.

1181. H. repandum, Blox., Duby, Hyst. p. 27, tab. 1. f. 6.

On rotten stumps. Orton Wood, near Twycross, Rev. A. Bloxam.

Perithecia almost free, elliptic, the lips well rounded; aperture gaping. Asci rather short; sporidia broadly cymbiform, the apex at one end very slightly elongated and perfectly hyaline, 0006-0007 inch long*.

PLATE V. fig. 38. a. ascus and paraphyses, magnified; b. sporidia, more highly magnified.

BIBLIOGRAPHICAL NOTICE.

Geological Map of England and Wales. By Prof. RAMSAY, F.R.S., F.G.S., &c. 3rd edition. 1866.

THAT a new edition of this useful Map should be required speaks well of the public taste for geological knowledge; or at all events indicates that the public find that they require and can use a map showing at a glance to those who can read it aright the real structure of the country, the chief characters of its hills and valleys, the courses of its rivers in relation to the nature of the uplands, and the projections and hollows of its coasts in relation to the harder and softer materials of its rocky skeleton, and, still more, the relative position of its mines, coal-pits, quarries, and other sources of mineral wealth. The traveller may, if he will, recognize the geological character of the country he is passing through by rail or otherwise, by referring to this handy sheet; the tourist may spread it out on the green sward, the beach, or the barren hill-top, and trace out the deep-set roots of the mountain, the inland range of the sea-cut strata, or the structure of hill and dale around, and take in new pleasure with his satisfied curiosity, besides all the delight that light and shade, form and colour, changing cloud and rippling water can give him, be he artist or amateur. Fishing and shooting, too, have an additional zest with the geologist; for he is rarely too busy not to see something new; and when sport is dull, the eye is still pleasingly at work.

^{*} Coniocybe baomyciodes, Erbario Crittogamico Italiano.

On turpentine. Lucknam, Dec. 10, 1864.

From pallid white to a bright yellow, sometimes brick-red, scattered over some Sporidesmium (Tromera resina) which colours the turpentine black.

The genus Coniocybe is a very doubtful member of the Fungi; and the species, which is new to Great Britain, is therefore recorded in a note.